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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHARMA, SUJATHA R

ART UNIT

PAPER NUMBER

2682

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/439,348

Applicant(s)

FEBVRE ET AL.

Examiner

Sujatha Sharma

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 18 and 26-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-9 is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-15, 18 and 26-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Election/Restrictions

1. Claims 19-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group II, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 13.

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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4. Claims 1-5,7 are rejected under 35 U.S.C. 102(e) as being anticipated by Scott [US 6,388,997].

Regarding claim 1, Scott discloses a method for timing adjustment control method for an efficient time division duplex communications. Scott further discloses a method of receiving a burst transmission from a transceiver in a time slot and calculating a timing correction value to synchronize the transmission timing with the reference and transmitting the said correction value to the transceiver. See abstract and summary of invention.

Regarding claims 2 and 5, Scott further discloses a method of transmitting to the transceiver a time slot allocation in a plurality of time slots. See abstract, column 7, lines 52-65, column 8, line 55 – column 9, line 24.

Regarding claim 3, Scott further discloses the plurality of time slots forming a sequence block whose length is greater than the maximum variation in the propagation delay. See column 7, line 52 – column 8, line 25.

Regarding claims 4,7 Scott discloses a method for timing adjustment control method for an efficient time division duplex communications. Scott further discloses a method of receiving a burst transmission from a transceiver in a time slot and calculating a timing correction value to synchronize the transmission timing with the reference and transmitting the said correction value to the transceiver. Scott further discloses a method where the transceiver sends the subsequent transmissions according to the timing correction value. See abstract and summary of invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott [US 6,388,997] in view of Kronz [WO 99/00931].

Regarding claim 6, Scott as treated in claim 4 does not disclose a method of selecting the time slot randomly.

Kronz teaches a method of selecting a time slot randomly. See page 11, lines 7-18.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to include the above teachings of Kronz in Scott's invention in order to allow the user to send a reservation request for transmission of data signal prior to obtaining a time slot allocation for data transmission.

Regarding claim 10, Scott discloses a method for timing adjustment control method for an efficient time division duplex communications. Scott further discloses a method of receiving a burst transmission from a transceiver in a time slot and calculating a timing correction value to synchronize the transmission timing with the reference and transmitting the said correction value to the transceiver. Scott further discloses a method of receiving the transmissions in the allocated time slot. See abstract and summary of invention.

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Scott however does not disclose a method of indicating to other users after a channel is allocated to a particular user.

Kronz teaches a method of allocating a channel and indicating to other users that the said channel is unavailable. See page 4, lines 4-15.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to include the above teachings of Kronz in Scott's invention in order to avoid collisions when users try to transmit in the same time slot.

7. Claims 11-14,26,27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weigand [US 6,400,734] in view Pound [US 5,278,827].

Regarding claims 11 and 12, Weigand discloses a data burst comprising of a first synchronous sequence followed by data. See Fig 2. Weingad, however does not disclose the use of a second synchronizing sequence following the data sequence.

Pound teaches a method of using a second synchronizing sequence. See abstract.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to include the above teachings of Pound in Weingad's invention in order to ensure synchronization in the event that one of the synchronizing words is corrupted due to fading.

Regarding claims 13 and 26, Weingad further discloses the data burst to include an initial preamble prior to the first synchronizing sequence. See Fig. 2.

Regarding claim 14 and 27, Weingad further discloses the burst transmitted in a time slot channel. See Fig. 2.

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8. Claims 15 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weingand [US 6,400,734] in view Scott [US 6,388,997].

Regarding claims 15 and 28, Weingand as treated in claim 11, does not disclose the use of guard band in the frame structure.

Scott teaches the plurality of time slots separated by guard bands that allow for timing errors. See column 13, lines 3-18.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to include the above teachings of Scott in Weingad's invention in order to reduce interference and collision during the transmission process.

Allowable Subject Matter

9. Claims 7-9 are allowed over prior art.

The closest prior art Scott [6,388,997] does not disclose a method determining a timing uncertainty value and transmitting the said value to the transceiver. Therefore the claims 7-9 are allowed.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee [US 5,710,765] discloses a method and apparatus for increasing the system efficiency of a TDMA system by reducing time slot guard time.

Chater-lea [GB 2 301 734 A] discloses a synchronization of a communications system using a relay and frame divided data.

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Alvarez [US 4,346,470] discloses an initial acquisition of synchronization for a station in a TDMA satellite communication network.

Deal [US 4,888,769] discloses a TDMA terminal controller.


Heuvel [GB 2 277 232 A] discloses the timing of transmission from a mobile unit in a TDMA communication system.


Kuo [US 5,303,234] discloses a random access data communication system with slot assignment capability for contending users.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sujatha Sharma whose telephone number is 703-305-5298. The examiner can normally be reached on Mon-Fri 7.30am - 4.00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 703-308-6739. The fax phone numbers for the organization where this application or proceeding is assigned and for all official communications is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3800.


Sujatha Sharma
February 5, 2003


VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
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